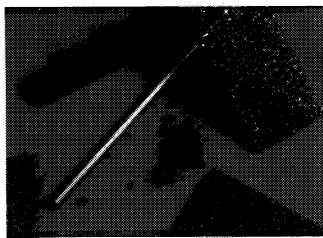


Research Help



The experience of The Electrosynthesis Company, Inc., East Amherst, New York illustrates the benefits available to industry through a network of NASA assistance centers that provide information retrieval services and technical help. NASA operates 10 such centers serving different geographical areas; the one in this instance is NERAC, Inc., Tolland, Connecticut.

Electrosynthesis is a small entrepreneurial firm that receives research and development funding through the Small Business Innovation Research (SBIR) program. Company president Dr. Norman Weinberg states that he uses NERAC's services to advantage in preparing each SBIR proposal. NERAC prepares customized literature searches, provides helpful technological background and current awareness information—including pertinent NASA

technology—and helps participants investigate patents, gain competitive intelligence and identify qualified technical experts.

NERAC also provides information about commercial possibilities and market conditions. Electrosynthesis plans internal manufacturing and marketing of certain of its products and expanded marketing through licensing agreements with larger manufacturers.

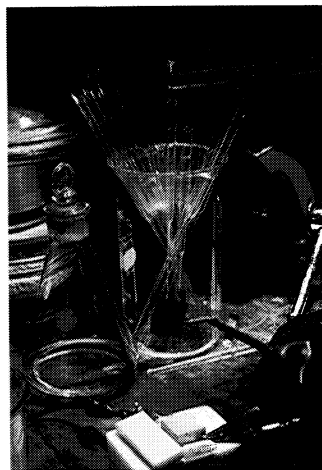
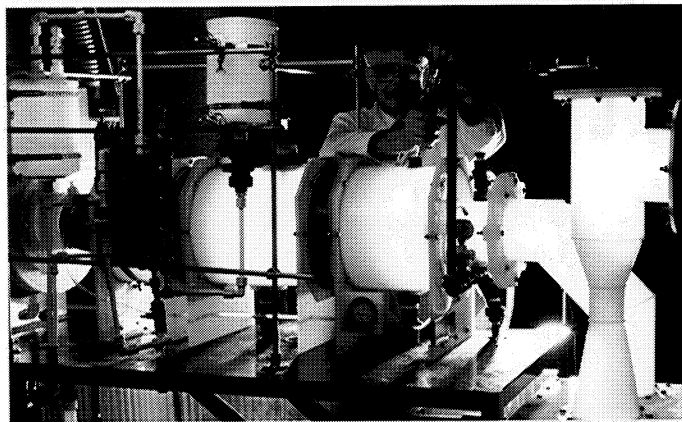
Among several projects in R&D or limited production status is a family of carbon/graphite materials known as Specifically Fluorinated Carbons or SFC™. Shown in various forms above, SFC materials offer efficiency improvement and extended lifetime for batteries, fuel cells and electrodes due to superior stability and electrocatalytic properties.

Electrosynthesis is also investigating other chemically modified carbons for use in

lithium batteries. The bottom photo shows a test of a lithium/carbon battery bathed in thiomyl chloride solution. The composition is readily decomposed when oxygen or water vapor is present, so the test is conducted inside a "glove box" with an inert argon gas environment free of moisture and oxygen.

Below, a scientist is testing the efficiency of the company's Electrocinerator™ System, which integrates a highly effective air scrubber

with an electrochemical cell to provide an apparatus capable of destroying virtually all toxic chemicals and airborne bacteria. The project is funded by the Department of Defense as a prospective means of decontaminating airborne chemicals and biological warfare agents. It also has broad civil use applicability, for example, hospital use for destruction of airborne viruses and bacteria and industrial use for eliminating toxic solvent vapors and malodorous emissions. ▲



™SFC and Electrocinerator are trademarks of The Electrosynthesis Company, Inc.